

*Laminaria***Antioxidative activity of animal and vegetable dietary fibers**

Suzuki N, Fujimura A, Nagai T, Mizumoto I, Itami T, Hatake H, Nozawa T, Kato N, Nomoto T, Yoda B

BIOFACTORS

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Abstract:

Some dietary fibers originated from insects such as silkworm (Sericin) and others along with constituents of several representative seaweeds such as wakame *Undaria pinnatifida*; hijiki *Hizikia fusiforme*; and kombu **Laminaria japonica**, were found to have fairly large reaction rates determined by quenching experiments of emission spectra in the near-infrared region lambda(max) 1270 nm for singlet oxygen O-1(2), Cypridina luminescence method for superoxide, and peroxide value (POV) for autoxidation. The determined reaction rates are between 10(3) 10(5) (g/L)(-1) s(-1) for the insect and the plant dietary fibers; the larger ones are as large as that of ascorbic acid, 1.93 x 10(4) (g/L)(-1) s(-1) for singlet oxygen. Most of these seaweed constituents also showed antioxidative activity against autoxidation and superoxide as well as their immunological enhancing activity. These results suggest a possibility that dietary fibers that are supposed to prevent the large-intestine **cancer** by their physical properties may prevent the **cancer**, at least in parts, by their chemical, antioxidative activity.